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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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In the Matter of

Deployment of Wireline Services Offering  
Advanced Telecommunications Capability

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CC Docket No. 98-147

COMMENTS OF GTE

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FEDERAL COMMUNICATIONS COMMISSION  
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**COMMENTS OF GTE**

GTE Service Corporation and its affiliated domestic communications companies (collectively "GTE")<sup>1</sup> respectfully submit their comments on the Further Notice of Proposed Rulemaking ("FNPRM") in the above-captioned matter. The FNPRM seeks comments on two broad sets of issues: (1) spectrum compatibility and management policies for advanced services, and (2) "line-sharing" (the use of a single ILEC access line by more than one carrier to provide different services).

As discussed herein, GTE agrees with the Commission that the industry can develop standards to promote deployment of advanced services in a fair and open manner that obviates the need for Commission intervention. Indeed, this process is well under way. GTE strongly disagrees with the Commission's proposal to require ILECs to "unbundle" spectrum on a loop for use by competing carriers. There is no legal basis for requiring spectrum unbundling, and mandatory line-sharing would deter

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<sup>1</sup> GTE Alaska, Incorporated, GTE Arkansas Incorporated, GTE California Incorporated, GTE Florida Incorporated, GTE Hawaiian Telephone Company Incorporated, The Micronesian Telecommunications Corporation, GTE Midwest Incorporated, GTE North Incorporated, GTE Northwest Incorporated, GTE South Incorporated, GTE Southwest Incorporated, Contel of Minnesota, Inc., GTE West Coast Incorporated, and Contel of the South, Inc.

investment, impair residential competition, impose unnecessary costs on ILECs, and raise difficult operational issues.

## **I. INTRODUCTION AND SUMMARY**

This proceeding originated with petitions by numerous ILECs for forbearance or relaxation of regulatory impediments to the deployment of advanced services. Those petitions, ironically, have achieved precisely the opposite of their intended effect. Rather than permitting ILECs to compete on a relatively even footing with the cable companies, electric utilities, satellite providers, CLECs, and wireless carriers that dominate this nascent market, the Commission has placed even greater regulatory burdens on ILECs. At the same time, the agency has expressed concern about a perceived lack of deployment of these services to residential consumers – and now is using that concern, both here and in the UNE remand proceeding, as the basis for proposing still further burdens.

GTE respectfully submits that the Commission's analysis is 180 degrees off track. CLECs need no additional help to serve any class of customer. They, along with the cable companies, are taking full advantage of their complete flexibility and the regulatory constraints on ILECs (including mandated retail rates that are economically irrational) to pick off the most lucrative businesses and residences. Placing additional restraints on ILECs would only exacerbate the situation, deterring investment by ILECs and CLECs alike and penalizing a category of competitors for no reason other than their historical dominance of an entirely different market. The best way to stimulate deployment of advanced services is to ratchet down regulation to the minimum level

needed to assure access to broadband transmission services by all downstream providers.

In determining how to act on the instant FNPRM, GTE therefore urges the Commission to exercise regulatory restraint and acknowledge that further intervention will be counter-productive. With respect to spectrum management, GTE agrees that the industry must develop, through fair and open processes, standards that permit the broadest possible deployment of advanced services consistent with avoiding degradation of other services. The Commission must recognize, however, that this process is well under way in Committee T1, that no industry group dominates Committee T1, and that every company, whether or not a member of that Committee, has a right to contribute to its deliberations. There is, therefore, no need for the Commission to dictate processes to Committee T1 or establish a new forum for addressing spectrum management issues (assuming it had authority to do so). Rather, the Commission should encourage maximum participation in Committee T1 by requiring any company that seeks a particular outcome with respect to spectrum management to take part in the industry process, instead of simply running to the Commission with a complaint. The Commission also must take care not to interfere with the ability of a facility owner to preserve service quality and network integrity, particularly in cases where final standards have not yet been developed or do not adequately address the interference potential of a particular configuration of services or technologies.

With respect to spectrum unbundling, GTE submits that there is no legal or policy basis for adopting the tentative conclusions in the FNPRM. That document does not even attempt to analyze the lawfulness of spectrum unbundling under the statutory

framework and the Supreme Court's recent opinion. Engaging in that analysis confirms that the Commission lacks authority to order such unbundling.

Loop spectrum, as a threshold matter, does not fall within the statutory definition of "network element." Moreover, even if loop spectrum were a network element, there is no reasonable interpretation of the Section 251(d)(2) necessary/impair test that would permit the Commission to mandate its unbundling. CLECs – including data-only CLECs – are thriving without access to unbundled loop spectrum. They have a multitude of means to provide advanced services to all customer classes, including simply purchasing a complete loop (where such loops meet the statutory standard for unbundling). Contrary to the speculation in the FNPRM, the lack of access to unbundled loop spectrum imposes no economic or technical impediment, let alone impairment within the meaning of 251(d)(2), on a CLEC that wishes to provide advanced services. CLECs can choose to offer voice and data or to contract with another CLEC to provide voice on the unbundled loop. The voluntary business decision by a CLEC to forswear voice services altogether simply cannot be used to bootstrap an impairment finding (or, just as ludicrously, to find that an ILEC is engaging in a price squeeze).

Finally, even if loop spectrum were a network element and met the impairment standard, there are compelling policy reasons not to require that it be unbundled. Forcing ILECs to unbundle loop spectrum would undermine incentives for investment in advanced services by ILECs and CLECs alike and would deny residential consumers the benefits of competition for their voice services. Mandatory line-sharing also would require ILECs to incur unnecessary costs – which would have to be recovered from

CLECs – in order to modify operations support systems to accommodate multiple carriers operating on a single line. GTE estimates that these costs would exceed five million dollars for its network alone. And, involuntary spectrum unbundling would raise complex operational issues that could impair network reliability and quality of service, causing consumer frustration with both ILECs and CLECs. In short, spectrum unbundling is a bad solution to a problem that does not even exist.

**II. INDUSTRY BODIES ARE DEVELOPING STANDARDS FOR ADVANCED SERVICES IN A FAIR AND OPEN MANNER WITHOUT THE NEED FOR COMMISSION INTERVENTION.**

The FNPRM states that “there should be a competitively neutral spectrum standards setting process to investigate the actual level of interference between technologies to determine what technologies are deployable and under what circumstances.”<sup>2</sup> It then asks a series of questions regarding the structure of this process and the Commission’s role (if any) in achieving the desired result. GTE responds to these issues below.

Competitively neutral process (¶ 79). The Commission correctly points out that the advanced services standards-setting process should be “competitively neutral in both structure and procedure,” and seeks comment on its authority to direct industry bodies to develop spectrum compatibility and management policies to “adhere to any requirements we establish for the functioning of such bodies.”<sup>3</sup> GTE respectfully

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<sup>2</sup> FNPRM, ¶ 79.

<sup>3</sup> *Id.*

submits that the working groups of Committee T1 already operate in an open, neutral manner and that the Commission's role should be limited to encouraging participation in the Committee T1 process.

Committee T1 is sponsored by the Alliance for Telecommunications Industry Solutions (ATIS) and is accredited by the American National Standards Institute (ANSI). Membership and participation in Committee T1 are open to all parties with a direct and material interest in its standards-setting process.<sup>4</sup> Committee T1 is not dominated by any single interest group; rather, it includes representatives from ILECs, CLECs, manufacturers, and ISPs, and its policy of open membership and balanced participation assures the integrity of the standard formulation process. The fairness of this process is further guaranteed by ANSI's requirements to announce meetings and distribute agendas in advance, to adhere to written procedures governing the methods used to develop standards, and to afford public notice and opportunity to comment on proposed standards. Moreover, the standards-development process is driven by formal presentations (called contributions),<sup>5</sup> so that any company can participate, whether or not a member.<sup>6</sup>

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<sup>4</sup> The Committee T1 Procedures Manual is available on Committee T1's home page, <[www.t1.org](http://www.t1.org)>.

<sup>5</sup> Through mid-April, Committee T1 had received roughly 115 contributions from members and non-members regarding its draft advanced services standard.

<sup>6</sup> Although non-members can not vote on Letter Ballots, they can still submit comments, which the Working Group makes every reasonable effort to resolve. Letter Ballots provide Committee T1 members with the opportunity to review, comment on, and approve or disapprove a draft standard.

Against this background, the most appropriate role for the Commission is to encourage interested parties to contribute to and participate in the standards development process and indicate areas it would like to see addressed on a priority basis. In this regard, the Commission should be highly suspicious of any party that alleges bias in the Committee T1 process yet chooses not to participate in its deliberations.<sup>7</sup> That process, as noted above, is fully open, and there are no appreciable barriers to participation, as is evidenced by the breadth and diversity of the membership and non-member contributors.<sup>8</sup> A Commission mandate to adopt specific procedures is therefore unnecessary.

Finally, the Commission's authority to direct standards bodies to operate in a particular manner (or, more radically, to create new standards bodies) is, at best, questionable. Section 256 of the Act authorizes the Commission to establish procedures only for its own oversight of coordinated network planning by telecommunications service providers, and to participate "in a manner consistent with its authority and practice prior to the date of enactment in the development by appropriate industry standards-setting organizations of public telecommunications

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<sup>7</sup> The Commission also must recognize that the T1 process (like all industry standards bodies) produces results that are compromises among the positions advocated by a multitude of disparate interests. No company, and no industry segment, gets everything it asks for in the final T1 guidelines. Consequently, the mere fact that an individual company may disagree with Committee T1's work product in whole or in part does not suggest bias or discrimination; it is an inevitable byproduct of the need for compromise.

<sup>8</sup> A list of Committee T1 member organizations can be found at <http://www.t1.org/html/t1member.htm>.

network interconnectivity standards ....”<sup>9</sup> Even assuming that standards relating to advanced services are “public network interconnectivity” standards,<sup>10</sup> which is not clear, the Commission has never, to GTE’s knowledge, required standards-setting bodies to employ particular procedures. Consequently, under Section 256, the Commission lacks authority to do so now.

Developing future power spectral density (PSD) masks (¶ 81). The Commission tentatively concludes that T1E1.4 is the best forum for developing future PSD masks.<sup>11</sup> GTE agrees with this conclusion, and further endorses the Commission’s goal of encouraging broader representation in this standards body. As noted above, membership and participation in Committee T1 are open to all parties with a direct and material interest in its activities. T1E1.4 is not dominated by any industry group, including ILECs. Rather, its meetings routinely attract well over one hundred participants from all industry sectors. Establishing another forum to deal with PSD issues (even if within the Commission’s authority) would undermine T1E1.4 and needlessly splinter technical resources, raising the risk that particular subject areas might not be covered as comprehensively as when a single entity can focus on all relevant issues. GTE therefore urges the Commission to adopt its tentative conclusion

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<sup>9</sup> 47 U.S.C. § 256.

<sup>10</sup> The Act defines this term to means “the ability of two or more public telecommunications networks used to provide telecommunications service to communicate and exchange information without degeneration, and to interact in concert with one another.” 47 U.S.C. § 256(d). The advanced services standards at issue here, in contrast, seek to avoid interference within a single carrier’s network.

<sup>11</sup> FNPRM, ¶ 81.

that T1E1.4 is the best forum for developing future PSD masks and to foster broader representation and participation in this entity by requiring parties first to address their concerns to this committee rather than bypassing the industry process and running to the Commission.

Generic and calculation-based approaches to defining spectral compatibility (¶¶ 82, 83). The FNRPM asks whether generic masks (*i.e.*, masks that apply to several technologies) are an appropriate means of addressing spectrum compatibility or whether a calculation-based approach, in addition to a PSD mask-based approach, provides a better tool for doing so.<sup>12</sup> The use of generic masks and calculation-based approaches is not an either/or proposition. Rather, each approach is appropriate when used in the right way.<sup>13</sup> In particular, if the spectral mask of a new service fits under a generic class in the standard, any deployment restrictions and guidelines that apply to that generic class would pertain to the new service. This test alone, however, would preclude new transmission schemes that are spectrally compatible, and would stifle creativity for providing copper access solutions. Therefore, if a new service or technology does not fit into any existing class, an analytical method is used to determine whether a new spectrum management class, based on the new technology's PSD, should be created.<sup>14</sup>

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<sup>12</sup> FNPRM, ¶¶ 82-83.

<sup>13</sup> These two methods are represented by Methods A and B in the T1E1 draft standard for spectrum compatibility, T1E1.4/99-002R3 Section 4.

<sup>14</sup> The analytical method involves the computation of signal-to-noise margins and follows established industry practices for demonstrating the spectral compatibility of

(Continued...)

Fair and open deployment practices (§ 85). GTE concurs with the Commission's tentative conclusion that T1E1.4 should serve as the forum for establishing fair and open practices for the deployment of advanced service technologies.<sup>15</sup> The Commission need not, however, develop a method for assuring active participation by all industry segments. There is already active participation across the full range of affected interests, and each individual company has an obligation to participate if it wishes to assure that its views are expressed and considered. As noted above, the Commission should simply instruct parties to bring their concerns directly to Committee T1 instead of involving the Commission in disputes that T1 was given no opportunity to resolve.

Deployment of new technologies within binder groups (§ 86). The FNPRM asks how to maximize deployment of new technologies within binder groups while minimizing interference. Specifically, the Commission seeks comment on the development, maintenance, and updating of xDSL binder group administration practices and inquires whether ILECs should be allowed to segregate xDSL technology in separate binder groups.<sup>16</sup>

The process of developing binder group administration policies falls squarely within the ambit of T1E1.4, and that group already has agreed in principle that

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new loop services and technologies during the standards development process.

<sup>15</sup> FNPRM, § 85.

<sup>16</sup> FNPRM, § 86.

technologies that demonstrate spectral compatibility using the analytical method shall not rely upon binder group separation in order to achieve full compatibility with any guarded transmission systems other than T1. Pending the development of final industry standards, the Commission should assign unambiguous responsibility for network reliability and integrity to the facility owner. It should not dictate interim rules (even if it had authority to do so), because there is a risk that any interim rules would become *de facto*, but sub-optimal, standards. Until Committee T1E1.4 finalizes its standards work, segregation by binder group or cable should be permitted to maintain network reliability and integrity where necessary.

Grandfathering of interfering technologies (§ 87). The FNPRM seeks comment on whether to adopt a grandfathering process for interfering technologies, and in particular, whether to establish a sunset period for AMI T1.<sup>17</sup> GTE strongly opposes any requirement to cease use of AMI T1. This technology is used extensively in the provision of HiCap service to end users. AMI T1 also is deployed internally within GTE's network in exchange cable feeding DLCs, each of which may serve hundreds of customers. In many cases, removing this technology would necessitate uneconomic replacement of both cable plant and customer premise equipment.<sup>18</sup> Rather than

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<sup>17</sup> FNPRM, § 87.

<sup>18</sup> GTE estimates that it would cost approximately \$ 400 million to remove all copper-based T1 AMI from its network. Approximately 30 percent of existing DS1 service (approximately 28,200 DS1s) is provided via T1 AMI. While the cable pairs being used by the T1 AMI can be reused, it would cost \$ 500 per pair (\$ 1000 per T1) to reclaim them. Adding in the cost for HDSL repeaters, the composite cost per T1 will be approximately \$ 6700, for a total of \$ 189 million. In addition, approximately 2120 DLC locations are served via exchange copper using T1 AMI technology. The fiber  
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imposing significant costs on carriers and customers, a far better approach is simply to allow AMI T1 to be replaced over time with new technologies, such as HDSL.<sup>19</sup> Carriers must be permitted to make economically sound decisions regarding the retirement of serviceable technology.

Dispute resolution (§ 88). The Commission asks whether to develop a process to resolve disputes about whether a technology is significantly degrading other services, as well as how to define "significantly degrade."<sup>20</sup> GTE recognizes that disputes may arise, prior to development of final industry standards, regarding whether a particular use of a loop would raise reliability or integrity concerns. In an effort to avoid such disputes (and provide a mechanism to resolve such disputes expeditiously), GTE endeavors to include in its interconnection agreements a detailed provision to govern spectrum interference issues. GTE also is developing internal spectrum management policies, which will be completed in the fourth quarter of this year. Those policies will be made publicly available, will be consistent with the T1E1.4 guidelines,<sup>21</sup> and will be applied to GTE and others on a nondiscriminatory basis.

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replacement cost per location would be approximately \$ 71,000 (assuming a 6-fiber cable at an average distance of 20,000 feet), and the fiber terminal costs would be approximately \$ 20,000, for a total cost per DLC site of approximately \$ 91,000. Multiplying by 2100 DLC sites, the total replacement cost would be approximately \$ 193 million.

<sup>19</sup> GTE uses HDSL for new HiCap service and, through attrition, will remove AMI T1 technology from its network.

<sup>20</sup> FNPRM, § 88.

<sup>21</sup> If GTE finds that a standard creates a problem as applied in a particular case, it  
(Continued...)

Any disputes that cannot be resolved under the agreements or neutral carrier policies should be handled through the arbitration process, as provided in Section 252 of the Act. In that process, the facility owner (often, but not always, the ILEC) should bear the burden of proof that its decision to exclude the assertedly interfering use is justified. At the same time, it is imperative that the facility owner be permitted to safeguard existing customers pending resolution of the dispute.<sup>22</sup>

In this regard, the *Order* (at ¶ 69) states that:

We further conclude that incumbent LECs cannot deny requesting carriers the right to deploy a new technology that does not conform to the standards cited in the preceding paragraph and has not yet been approved by a standards body (or otherwise authorized by this Commission or any state commission), if the requesting carrier can demonstrate to the state commission that this particular technology will not significantly degrade the performance of other advanced services or traditional voice band services. In this situation, there would be no presumption in favor of deployment and the burden would be on the requesting carrier to make the appropriate showing.

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adjusts its standard to assure network integrity and informs Committee T1 of its experience.

<sup>22</sup> For example, GTE must be able to ensure that its network is not compromised by CLEC services using the same or adjacent facilities. When a CLEC orders an unbundled loop, using Network Channel/Network Channel Interface (NC/NCI) codes appropriate to the loop's intended use, GTE provisions the facilities based on those codes and, in most cases, ensures that no service interference will occur. After the loop has been provisioned, there is a possibility that the CLEC may use it in a manner for which it was not intended. For example, when a 2-wire analog loop is ordered and loop-enhancing equipment, such as is used for ADSL, is added, it could be turned up without out any problems. However, because a digital loop (appropriate for ADSL applications) was not ordered, the facility may ultimately interfere with other services, such as legitimately provisioned ADSL or ISDN. In such circumstances, GTE must be able to disconnect the loop and subsequently notify the CLEC of the problem.

Requesting carriers therefore must provide the information necessary to permit an ILEC to determine that the transmission energy the requesting carrier intends to introduce into the network will not interfere with other services already existing in the cable sheath or binder group. In particular, if the proposed service is not consistent with the T1E1.4 guidelines, the requesting carrier must provide verifiable testing to confirm that the non-conforming technology is compatible and will not restrict the deployment of technologies compatible with the T1E1.4 standards. The cable operator, consistent with industry standards and local administration rules, would make the determination (subject to appeal to the PUC) whether the introduction of the proposed energy would significantly degrade or otherwise create interference with other services.

GTE supports a definition of "significantly degrade" that focuses on end user expectations. In particular, a carrier can demonstrate that a service has been significantly degraded in two ways: (1) verifiable test results obtained from routine testing, and (2) customer trouble reports stemming from spectral interference, determined on the basis of verifiable test results. Routine testing monitors for service degradation using measurements such as bit error rate ("BER") and signal-to-noise ratios ("SNR"). To the extent that routine testing determines that customer services are operating outside of the quality standards specified in the carrier's tariffs as a result of spectral interference, service degradation has occurred. Nonetheless, while local loops are routinely tested, they are not typically monitored for performance on a full-time basis. Therefore, intermittent or transient problems may not be detected. If a reduction in service quality causes a customer to initiate a trouble report, and the service provider

is able to trace the problem to interference by another service, then the customer's service also has been significantly degraded.

Third-party administration (§ 89). The FNPRM seeks comment on identifying a third party to develop spectrum management policies and serve a role similar to that performed by the administrator for local number portability.<sup>23</sup> This recommendation is highly impractical and should not be pursued. First, this is precisely the function that T1E1.4 already is performing effectively. Halting the existing process while a third party is identified and commences operation would inject substantial delay and uncertainty into the standards-setting process. Second, if the intent is to give the third party access to each ILEC's cable and assignment records, GTE strongly objects to the usurpation of its ability to control use of its own network. Third, any centralized assignment or dispute resolution function would be doomed to failure because the interference susceptibility of each cable pair must be determined on an individualized basis and often requires a field visit. The Commission should leave Committee T1 in charge of developing spectrum management guidelines and permit individual carriers to assign and manage their own facilities based on publicly disclosed, internal processes that reflect the real-world technology and capabilities of their networks.

Evolution of spectrum policies (§ 91). The FNPRM inquires how to assure that spectrum management policies evolve over time to encourage innovation and deployment of advanced services.<sup>24</sup> There is no need for Commission action to assure

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<sup>23</sup> FNPRM, § 89.

<sup>24</sup> FNPRM, § 91.

achievement of this goal. The guidelines developed by T1E1.4 are designed to evolve over time to accommodate new technologies while assuring against interference.<sup>25</sup> By way of example, T1E1.4 will have its spectral management document ready for Letter Ballot by the end of its June 1999 meeting. Because the technologies are rapidly evolving, however, and new field data are being generated, T1E1.4 will start revising its initial document immediately after it is approved.

As a general matter, the compatibility of future technologies and services will need to be determined with respect to both guarded loop transmission systems and other new technologies and services. This can best be accomplished through standardization of a new spectrum class, as needed, with signal power limits and deployment restrictions that encompass each new offering that does not fit under one of the generic classes. This is the normal working process of Committee T1 and will not stifle innovation or impede deployment of advanced services.

\* \* \*

The industry, through Committee T1, is fully capable of addressing spectrum management issues associated with the deployment of advanced services in an open and fair manner. Commission intervention is therefore unwarranted and in fact would risk delaying decision-making. The Commission can do the most good by encouraging all interested parties to participate in Committee T1 and requiring companies to take

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<sup>25</sup> The nature of spectrum compatibility standards is such that each new requirement must undergo testing to assure compatibility with existing uses. That is, as binder groups are occupied with new kinds of services, technicians continually test to assure against interference.

part in the industry process rather than bringing grievances to the Commission in the first instance.

### **III. THERE IS NO LEGAL OR POLICY BASIS FOR SPECTRUM UNBUNDLING.**

The FNPRM tentatively concludes that ILECs “must provide requesting carriers with access to the transmission frequencies above that used for analog voice service on any lines that LECs use to provide exchange service when the LEC itself provides both exchange and advanced services over a single line.”<sup>26</sup> Such unbundling, according to the Commission, is needed to avoid placing competitive LECs at an economic disadvantage,<sup>27</sup> to eliminate a need for investment by CLECs in circuit-switched technology,<sup>28</sup> and to promote consumer choice and competitive deployment of advanced services.<sup>29</sup>

As GTE shows below, line-sharing cannot legitimately be mandated under any reasonable interpretation of the Communications Act.<sup>30</sup> Moreover, even if the Commission had legal authority to order spectrum unbundling, doing so would be

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<sup>26</sup> FNPRM, ¶ 99.

<sup>27</sup> FNPRM, ¶¶ 99, 106 and n.226.

<sup>28</sup> *Id.* at ¶ 99.

<sup>29</sup> *Id.* at ¶¶ 94, 96.

<sup>30</sup> The Commission also tentatively concludes, contrary to the Act, that the states may mandate line-sharing. As GTE explained in its UNE remand comments, the states have no independent authority to require access to network elements. If an element does not meet the 251(d)(2) standard, neither the FCC nor the states may mandate access to it. Comments of GTE, CC Docket No. 96-98 (filed May 26, 1999), at 29 (“GTE UNE Remand Comments”).

directly contrary to the public interest. Not only are the speculative benefits cited in the FNPRM unfounded, but spectrum unbundling would impose uneconomic costs, deter investment, and thereby impair competition and harm consumers.

**A. Loop Spectrum Is Not a Network Element and Therefore Is Not Subject to Unbundling.**

ILECs cannot be compelled to unbundle loop spectrum because that spectrum is not a “network element.” As defined in the Act, a “network element” is “a facility or equipment used in the provision of a telecommunications service,” and also includes “features, functions, and capabilities that are provided by means of such facility or equipment ...”<sup>31</sup>

Loop spectrum (whether at or above the voice frequencies) plainly is not a “facility or equipment.” Nor is spectrum a feature, function, or capability of the loop. Spectrum is different in kind from the “features, functions, and capabilities” listed in the statute (telephone numbers, databases, and signalling), all of which are ancillary functions used in the provision of service rather than physical characteristics of a network component. The loop is simply twisted pairs of copper wire or equivalent technology. That material has no features, functions, or capabilities other than the properties and appearance of the substance from which it is made. Rather, the spectrum used to provide advanced services is derived by means of the electronics attached at each end of the loop (e.g., for ADSL, the xDSL modems). The spectrum itself, therefore, is not a network element.

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<sup>31</sup> 47 U.S.C. § 153(29).

**B. Even if Loop Spectrum Were a Network Element, It Does Not Meet the Necessary/Impair Standard.**

As the Supreme Court has made abundantly clear, the mere fact that something may be characterized as a network element does not mean that it must be unbundled. Rather, the necessary/impair standard set out in Section 251(d)(2) is intended to limit the unbundling obligation: at a minimum, that standard requires the Commission to consider the availability of alternatives to the element at issue and to recognize that any increase in cost or decrease in quality does not constitute impairment. Moreover, the statutory determination compels the Commission to take into account “the objectives of the Act” and to “giv[e] some substance to the ‘necessary’ and ‘impair’ requirements.”<sup>32</sup>

As GTE explained in its UNE Remand Comments, the Court’s decision permits the Commission to order unbundling only where doing so is necessary to promote meaningful competition, and not just the interests of particular competitors.<sup>33</sup> To achieve this objective, unbundling should be mandated only where an element is essential to competition and there is convincing evidence that CLECs cannot effectively compete using substitutes for the element available from alternative sources.<sup>34</sup> Applying this standard to loop spectrum – or, indeed, applying any rational

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<sup>32</sup> AT&T v. Iowa Utilities Board, 199 S. Ct. 721, 735-36 (1999).

<sup>33</sup> GTE UNE Remand Comments at Section I.

<sup>34</sup> *Id.* at 3-4.

interpretation of “impair” – line-sharing patently fails to meet the statutory threshold for mandatory unbundling.<sup>35</sup>

**1. The Advanced Services Marketplace Is Already Competitive, Precluding a Finding that Spectrum Unbundling Meets the Section 251(d)(2) Standard.**

CLECs face no disadvantage in the advanced services marketplace; rather, they hold a commanding lead over ILECs in the deployment of broadband services to consumers. GTE detailed this state of affairs in its UNE Remand Comments:

Cable company and CLEC deployment of advanced services already dwarfs the availability of these services from ILECs. As demonstrated by the UNE Fact Report, CLEC xDSL and cable modem service are available in many more cities than ILEC xDSL service.<sup>36</sup>

According to Terry Barnich of New Paradigm Resources Group, “[b]y leveraging their infrastructure investments to deliver bandwidth, CLECs have positioned themselves to rule the data market. By 2001, CLEC data services will be valued at \$44 billion or more ....” The Association for Local Telecommunications Services ... claims that CLECs have already surpassed ILECs in providing advanced services over ILEC loops and that CLECs are “driving the deployment of cutting-edge technology.”<sup>37</sup>

Covad is already providing service in 10 MSAs and expects to expand to 51 MSAs nationwide. Similarly, NorthPoint is operating in 17 markets and will add an additional 28 markets by the end of this year. Other companies, such as Concentric Network Corp., Network Access Solutions, Rhythms NetConnections,

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<sup>35</sup> As an initial matter, line-sharing indisputably cannot be mandated where the underlying loop itself does not satisfy the necessary/impair standard. As GTE demonstrated in its UNE Remand Comments (at 63-70), loops used to serve Multiple Dwelling Units, businesses with 20 or more access lines, and new residential or commercial developments do not meet that test.

<sup>36</sup> GTE UNE Remand Comments at 74 (footnote omitted).

<sup>37</sup> *Id.* at 75 (footnotes omitted).

and Intermedia are also expanding their networks and offering service throughout the United States.<sup>38</sup>

Indeed, as independent industry analysts have noted, with a growing data market and aggressive expansion plans, "broadband stocks have made serious waves on Wall Street, as investors buy shares in firms that are leading the charge for high-speed Net connections."<sup>39</sup> A stunning example is MGC Communications, which announced plans in April 1999 to utilize proceeds from the placement of \$47.5 million in convertible stock to roll out digital subscriber line high-speed services. The stock price of MGC increased five-fold within three weeks, from \$10 to over \$50 per share. Even as the euphoria associated with MGC's announcement subsided and the company announced on June 3, 1999 that it would issue five million new common shares, its stock price still remained above \$25 as of June 4.

More generally, data CLECs as a group are prospering. As the Yankee Group highlighted in a December 1998 report, "[t]he data CLECs have garnered considerable attention in the last few months and while the market today is relatively modest, the Yankee Group expects that the number of business DSL subscribers between 1998 and 2002 will increase at a CAGR of 115%."<sup>40</sup>

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<sup>38</sup> *Id.* at 76 (footnotes omitted).

<sup>39</sup> Grise, Corey, and Aimee Male, "Broadband All The Buzz on Wall Street," CNET News.com, April 12, 1999.

<sup>40</sup> Yankee Group, "Data CLECs: Delivering DSL Solutions to the Business Market," Telecommunications Reports, Vol. 13, No. 21, December 1998.

As GTE's UNE Remand Comments concluded, "[w]ith CLEC and cable company deployment of advanced services ahead of that of ILECs, there is no basis for considering ILECs as incumbents in this market or assuming that ILECs have any advantage in the provision of these services."<sup>41</sup> Nor was GTE alone in its assessment that "data-only" CLECs face no impediments in the advanced services market. Evidence provided by numerous other commenters in the UNE remand proceeding confirms beyond reasonable dispute that such CLECs are competing very effectively in this new market without access to unbundled loop spectrum.<sup>42</sup>

Spectrum unbundling therefore is a solution in search of a problem. Data CLECs are thriving as leaders in this market segment, and there is no evidence whatsoever that CLEC investment in advanced services is being constrained or oppressed. Without impairment, of course, there can be no compelled unbundling.

## **2. The Harms Allegedly Engendered by the Lack of Spectrum Unbundling Are Non-Existent.**

The Commission is wrong in suggesting that spectrum unbundling is needed to avoid placing CLECs at an economic disadvantage. As a threshold matter, reality in the market – including the phenomenal success of data CLECs like Covad, Concentric Network Corp., Network Access Solutions, NorthPoint, and Rhythms NetConnections – makes it impossible to characterize these companies as economically disadvantaged in

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<sup>41</sup> *Id.*

<sup>42</sup> See, e.g., Ameritech UNE Remand Comments at 118-125; Bell Atlantic UNE Remand Comments at 40-44; BellSouth UNE Remand Comments at 32-44; SBC UNE Remand Comments at 74-75, 80-86.

any way. To the extent a particular CLEC increases its risk (or foregoes potential revenue sources) by voluntarily choosing to limit the scope of its service offerings, this represents a strategic determination based on that CLEC's private information, expectations, and comparative advantage.

The Commission also is mistaken in noting that ILECs may be engaging in a price squeeze by denying line-sharing.<sup>43</sup> Any CLEC that wishes to use the loop in the same manner as the ILEC does – that is, to provide both voice and xDSL services – can and will continue to compete on an even footing with other carriers, including the ILEC.<sup>44</sup> It is only when a CLEC, of its own free will, decides to ignore the POTS market, that it creates even the possibility of not recovering the costs incurred to obtain an unbundled loop. The Commission cannot as a legal matter, and should not as a practical matter, insulate CLECs from the risks of their own business plans.

Moreover, a CLEC that wishes to provide only data services can contract with another CLEC to provide voice over the unbundled loop, mitigating any potential economic risks. As SBC has noted, “several major CLEC providers of high-speed services have already forged alliances with AT&T, WorldCom/MCI, and other long-distance carriers of both voice and data,” and NorthPoint has asked the Commission “to protect its right to sell off the voice channel on an unbundled loop to another provider.”<sup>45</sup>

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<sup>43</sup> See FNPRM at footnote 226.

<sup>44</sup> There is therefore no basis to argue that ILECs are discriminating against data-only CLECs. All carriers that wish to use a loop to provide voice and data services are treated the same.

<sup>45</sup> SBC Comments, CC Docket No. 96-98 (filed May 25, 1999), at 83.

Likewise, BellSouth has explained that data-only CLECs "can ally with CLECs that offer voice services and offer voice and data separately or in a bundle over a loop. In this case, the loop would be taken in its entirety, then shared depending on the responsible CLEC's plans. In the end, CLECs have the same competitive options open to them as do the incumbent LECs."<sup>46</sup>

Nor is spectrum unbundling necessary to prevent CLECs from having to invest in circuit-switched technology.<sup>47</sup> First, as noted above, a CLEC can avoid "dual investment" by contracting with another CLEC to provide voice services on the unbundled loop. Second, and most importantly, considering the strategies of firms like Qwest and Level 3, a CLEC can offer voice over packet-switched technology. In this regard, SBC points out that data CLECs like Rhythms NetConnections offers voice over DSL in San Diego and Covad provides a videoconferencing/voice/data over DSL capability on Southern California.<sup>48</sup> Indeed, the Commission itself at least implicitly recognizes that a CLEC's ability to deliver voice over a packet-switched network would undermine any basis for a line-sharing obligation.<sup>49</sup> For the same reasons, mandating line sharing would stymie efficient investment in voice-over-IP and other packet-switched alternatives.

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<sup>46</sup> BellSouth Comments, CC Docket No. 96-98 (filed May 25, 1999), at 46.

<sup>47</sup> See FNPRM, ¶ 99.

<sup>48</sup> SBC UNE Remand Comments at 83.

<sup>49</sup> FNPRM, ¶ 107.

Finally, even if the absence of line-sharing caused some cost increase for CLECs – which it does not – the Commission has no basis for finding that the impair standard has been met. The phenomenal success of data-only CLECs in the marketplace lays to rest any argument that they are being competitively hampered by being forced to take entire unbundled loops from ILECs. Line-sharing certainly would confer a competitive advantage on data-only CLECs by mitigating their self-imposed business risks, but it would be an advantage enjoyed by particular competitors at the expense of meaningful competition.

**C. Mandatory Line-Sharing Would Deter Investment, Harm Consumers, Impose Unnecessary Costs on ILECs, and Create Difficult Operational Problems.**

As demonstrated above, spectrum unbundling cannot be compelled consistent with the statute. However, even if the Commission concluded – contrary to the law and marketplace realities – that loop spectrum is a network element and that the lack of unbundled access would impair competition, there are sound policy reasons not to mandate line-sharing.<sup>50</sup>

Adverse impact on investment and innovation. The FNPRM specifically inquires whether line-sharing would create disincentives to investment.<sup>51</sup> The answer,

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<sup>50</sup> As GTE explained in its UNE remand comments, the Commission can consider other factors in determining not to require unbundling, but cannot order unbundling of an element that does not meet the necessary/impair standard. GTE UNE Remand Comments at 28.

<sup>51</sup> FNPRM, ¶ 97. While GTE certainly agrees that spectrum unbundling would deter investment, it must be noted that the line-sharing proposal in this proceeding is substantially different from the open access to broadband cable facilities that many

(Continued...)

unquestionably, is yes, for both CLECs and ILECs. As explained in the Jorde/Sidak/Teece affidavit, submitted with USTA's comments in the UNE Remand proceeding:

In the presence of mandatory unbundling of the traditional loop, mandatory spectrum unbundling exacerbates the disincentive for investment. It currently is both cost-effective and feasible for CLECs to provide their own DSLAMs and switching equipment to provide both DSL and POTS over an ILEC's unbundled "traditional" loops. For example, Paradyne has developed a DSL "starter kit" for extending service to as few as twenty subscribers over loops exceeding 20,000 feet. [fn. omitted] Given the feasibility of unbundling the entire loop for use by the CLEC, and the given desirability of increasing competition in the local telephone market, the consumer benefits of mandatory spectrum unbundling are nonexistent. ... The CLEC would pursue the more profitable, unregulated service, while the ILEC would be left providing basic local service (in many cases, below cost). Innovation would be eroded by regulations that arbitrarily favored CLECs, without regard to the adverse effect of such asymmetric regulation on the welfare of consumers.<sup>52</sup>

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(...Continued)

ISPs are advocating. *First*, an open access requirement in the cable modem context requires no unbundling of *facilities*, in contrast to line-sharing under section 251(c)(3). Rather, open cable access merely requires a cable operator to "de-tie" or "de-package" its high-speed (broadband) transport service from its affiliate's Internet access service. Thus, competing ISPs would not control the cable operator's facilities; the cable operator would simply be required to provide unaffiliated ISPs the same high-speed transport *service* as it provides its affiliated ISP. This is directly analogous to an ILEC's provision of dial-up or DSL transport *services* on a nondiscriminatory basis to all ISP customers. In the cable modem context, therefore, the term "unbundling" is a misnomer because no facilities are being unbundled. *Second*, open cable access is based upon a nondiscriminatory pricing principle, *i.e.*, a cable operator may charge an unaffiliated ISP no more than it charges an affiliated ISP. In other words, there is a market-based pricing in the cable open access model, rather than basing access on hypothetical forward-looking costs as in the UNE model.

<sup>52</sup> Jorde/Sidak/Teece affidavit, ¶ 78 (attached to USTA UNE Remand Comments); see also SBC UNE Remand Comment at 84 ("A loop has associated with it fixed costs that do not vary with. . . the different uses in a line-sharing environment. Thus, unless the price for the shared portion of the loop reflected the full fixed costs of the loop, any line-sharing requirement would cause inefficient investment.")

In addition, mandatory line-sharing “would decrease the ILEC’s incentive to develop innovative technical solutions that facilitate bundling, such as splitterless DSL.” Bundling, as the Commission has elsewhere acknowledged, can be highly beneficial to customers by increasing convenience and reducing total service costs.<sup>53</sup> The Commission should be seeking to promote, rather than undermine, ILECs’ ability to compete in the emerging bundled services market.

Finally, the Commission itself has recognized that obtaining access to an entire unbundled loop will promote innovation. In the *Local Competition Order*, the Commission denied requests for a “long distance loop UNE” and concluded that the loop element should be defined “in functional terms, rather than in terms of the facility itself.”<sup>54</sup> As the Commission reasoned, giving competitors “exclusive control over network facilities dedicated to particular end users” would create “maximum flexibility to offer new services.”<sup>55</sup> That conclusion was correct in 1996 and it remains valid today.

Harm to competition and consumers. Mandatory line-sharing also would diminish competition in the provision of voice service to residential consumers. “CLECs would simply pursue the most profitable advanced services portion of the customer’s demand. That digital cream-skimming would not necessarily increase competition in

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<sup>53</sup> See generally 1998 Biennial Regulatory Review – Review of Customer Premise Equipment and Enhanced Services Unbundling Rules in the Interexchange, Exchange Access and Local Exchange Markets, *Further Notice of Proposed Rulemaking*, FCC 98-258, CC Docket No. 98-183 (rel. Oct. 9, 1998).

<sup>54</sup> *Local Competition Order*, 11 FCC Rcd 15499, 15693 (1996).

<sup>55</sup> *Id.*

residential voice telephony; rather, it would more likely siphon off to CLECs the most lucrative opportunities among the most attractive customers of the residential market.”<sup>56</sup> By permitting CLECs to ignore residential voice services, the Commission would eliminate market pressures that otherwise would compel both ILECs and CLECs to find more efficient and innovative means of serving residential customers.

Unnecessary costs. A mandatory line-sharing requirement would impose unnecessary costs on ILECs, stemming primarily from the need to modify multiple operations supports systems (OSS).<sup>57</sup> Those costs would need to be recovered from requesting CLECs, as the cost-causers, considerably diminishing any economic advantage CLECs seek to obtain from spectrum unbundling.

GTE's preliminary assessment reveals that major modifications would be needed to the systems used to provision customer orders and handle repair requests. If a loop has line sharing, order systems must reflect that another provider is using a portion of the spectrum in order to prevent double assignment of service to that spectrum. Likewise, when a customer reports trouble on the voice service, GTE will need to know there is another service provider using the loop. If the trouble is isolated to the advanced service, the trouble report will need to be referred to the other carrier.

Based on a rough estimate of development hours, software upgrade and deployment and other project costs – and not including training expenses – GTE anticipates that these modifications would cost the company approximately five million

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<sup>56</sup> Jorde/Sidak/Teece affidavit, ¶ 64.

<sup>57</sup> See FNPRM, ¶ 105.

dollars.<sup>58</sup> Importantly, GTE would have no reason to expend this money if it were not required to permit spectrum unbundling; all of these modifications are needed only where a second carrier provides service over the same line as GTE does. Accordingly, if the Commission – contrary to law and sound policy – mandates line-sharing, it must re-affirm that any CLEC using this option must reimburse GTE for its portion of the actual up-front development costs, as well as the recurring costs associated with handling each order for unbundled spectrum.

Operational issues.<sup>59</sup> As the Commission acknowledges, the use of a single loop by more than one carrier can raise considerable operational issues.<sup>60</sup> GTE anticipates that the most difficult issues will arise with respect to spectrum management and service assurance and repair. For example, if a CLEC does not have to tell GTE what service it is placing on the unbundled spectrum, GTE will not be able to validate that the facility is qualified for the new service – that is, that there will be no degradation of

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<sup>58</sup> Modifications would need to be made, at a minimum, to the Automatic Assignment and Inventory System (to support inventory and provisioning for line sharing), to the Mechanized Accounting and Record-Keeping system (to flag a record as having line sharing, to the Trouble Administration System, to the National Ordering Collection Vehicle, and to ECPS. The extent and purpose of these modifications are described in Attachment 1 hereto.

<sup>59</sup> GTE does not consider line-sharing to be technically infeasible, contrary to the Commission's characterization of its comments. See FNPRM, ¶ 102. Nonetheless, the Commission should recognize that the availability of an ILEC's ADSL offering to multiple ISPs (such as the Pacific Bell/Concentric example cited in ¶ 103 of the FNPRM) is a very different situation from the sharing of a loop by multiple LECs. In the ILEC/ISP case, the ILEC maintains full control of the broadband transport arrangement. In the multiple-LEC situation, in contrast, the ILEC has only partial control over the loop, giving rise to the operational concerns discussed in the text.

<sup>60</sup> FNPRM, ¶ 105.

either the existing or the new service. Similarly, if an end user orders a service from the CLEC that interferes with the customer's existing voice service, is GTE responsible for rejecting the order from the CLEC and notifying the end user? Would GTE be under an obligation to notify the CLEC sharing the line when there is an outage? If the customer does not pay its local telephone bill for voice service, can GTE disconnect the line?

Mandatory line-sharing also would be likely to extend the time it takes to repair service problems. If a trouble report comes to GTE, it will have to determine whether the trouble is with the voice or the advanced service. This will involve temporarily disconnecting the advanced service to determine if the customer's regular telephone service works. If the POTS service works in the absence of the advanced service, GTE will have to clear the trouble ticket and advise the customer to contact the CLEC.

Additional complications would arise if the customer chose to switch either its advanced service provider or its voice provider. For example, if a customer wanted to change its voice service from GTE to a CLEC (other than the advanced service provider), would the new voice provider have to continue sharing the line (since it is not an ILEC and therefore not subject to unbundling obligations)? If the customer selects a new advanced service provider (other than GTE), does GTE have to further unbundle spectrum for that new provider, or is the CLEC obligated to transfer its unbundled spectrum to the new provider?

GTE does not mean to suggest that these operational problems are insurmountable; they are not. Indeed, an ILEC may reach the voluntary conclusion that line-sharing makes sense as a business matter – that is, that there are potential gains that offset the costs and difficulties associated with splitting the frequencies on a single

facility between two carriers. Likewise, two CLECs – one focusing on data services and one on voice – may be able to reach a business arrangement that successfully minimizes these concerns. For example, two CLECs working together may be able to have one act as the single point of contact with the customer and have end-to-end visibility into both carriers' networks; in a mandatory line-sharing situation such an accommodation is unlikely.

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For all of these reasons, the Commission should not require spectrum unbundling even if it had legal authority to do so. The best means of promoting deployment of advanced services is reducing regulations that stand in the way of investment, as GTE made clear in its filings in Docket No. 98-146. By allowing ILECs and CLECs to operate in this new market on an even footing, the Commission can assure that consumers benefit from vigorous and economically rational competition.

#### **IV. CONCLUSION**

Advanced services are being deployed by cable companies, electric utilities, satellite services providers, wireless carriers, CLECs, and ILECs to customers throughout the country. ILECs enjoy no advantage in this market; indeed, they have a far smaller presence than virtually any other industry segment. Accordingly, while GTE commends the Commission for seeking to encourage the deployment of these innovative and valuable services, it urges the agency to recognize that additional intrusive regulation is not the answer. Rather, the Commission should leave spectrum management issues to the industry and relax regulatory restrictions that impede ILECs

from competing with the dozens of other national and international companies that currently lead the ILECs in providing advanced services.

Spectrum management. Committee T1 is addressing spectrum management guidelines for advanced services in an impartial and open manner, free from undue influence by any segment of the industry. The Commission should focus its efforts on encouraging the broadest possible participation in the Committee's activities. To this end, it should make clear that any company wishing to have its views known on spectrum management issues should participate in the industry process rather than running to the agency with a complaint. In addition, the Commission should recognize that facility owners must have the ability to resolve interference issues promptly pending the development of industry standards.

Spectrum unbundling. There is no basis in law or sound policy for requiring spectrum unbundling. Loop spectrum is not a network element, and even if it were, there is no reasonable justification for concluding that ILECs have any advantage over CLECs in the advanced services market. CLECs are well ahead of ILECs in deployment of advanced services equipment – even over the ILECs' own loops – and are in no way hampered by having to buy unbundled loops rather than loop spectrum. In addition, even if the Commission had the legal authority to mandate spectrum unbundling, which it does not, there are compelling reasons not to do so. Deployment of advanced services would be hindered rather than aided by mandatory unbundling, and competition and consumers would suffer. The Commission should focus its efforts on deregulation, in accordance with the goals of Section 706, rather than adopting new

regulations that constrain investment incentives and give CLECs an additional leg up in the marketplace.

Respectfully submitted,

GTE Service Corporation and its  
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**Attachment 1:  
OSS Modifications to Support Line-Sharing**

**System:** ECPS LITE

**Function:** Interface between National Order Collection Vehicle (NOCV) and Trouble Analysis System (TAS)

**Modifications:** Must be modified to recognize and transfer any new information resulting from changes to the NOCV system. For example:

- Associated circuit numbers used for line sharing services on the Telephone Number (TN) account (and vice versa)
  - New Item of Service Codes (IOSCs) associated with each "line sharing" service
  - Operating Company Number (OCN) of the provider for each "line shared" service
  - Possible creation of a new service type to accommodate multiple "line sharing" service providers
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**System:** Trouble Analysis System (TAS)

**Function:** Trouble ticketing system, relies on the NOCV, Mechanized Accounting and Record-Keeping (MARK) system, and Telecom Business Solutions (TBS, a provisioning system) for assignment information.

**Modifications:** Required changes to TAS include:

- Must be modified to be able to cross-reference circuit numbers with the telephone number (assuming that GTE would assign circuit numbers to the "shared services" on a customer's line)
- TAS will accept a telephone number or a circuit number. Assignment information for telephone numbers comes from MARK and ECPS LITE. Circuit assignment information comes from TBS. TAS must be modified to access MARK and ECPS LITE when a "shared service" circuit number is entered.
- Must be modified to allow placement of the circuit number, telephone number, and OCN on the trouble ticket.

- Must be modified to display "shared services" based on the assigned IOSCs.
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**System:** CARE

**Function:** GTE Customer Care Centers enter trouble reports through the CARE system. CARE interfaces with TAS, so any changes to TAS affect the CARE system.

**Modifications:** CARE must be able to indicate that there are multiple services on the line and identify each service provider.

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**System:** AWAS (Automated Work Administration System)

**Function:** AWAS is used for GTE dispatch purposes. This system receives information from NOCV, MARK and TAS and passes it to the technicians. Any changes made to those systems could drive changes to AWAS.

**Modifications:** AWAS would need to be modified to allow for multiple circuit numbers, if assigned, for "shared services" on one line.

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**System:** 4-TEL

**Function:** 4-TEL is the system used by GTE to test telephone lines. It can recognize the "electronic signatures" of various devices on a telephone line and distinguish them from trouble on the line.

**Modifications:** 4-Tel would need to be modified to:

- Recognize the signature of *any* device a "line sharing" provider might place on the line
- Increase the size of the Signature Table